

Appl. No.: 09/844,947  
Amdt. Dated: October 25, 2006  
Reply to Office Action of: June 6, 2006

## REMARKS

**1. Claims**

Claims 1, 2, 4-9, 13, 15, 20, 21, 23 and 24 remain in this application. Claim 1 has been amended herein. Claim 1 is the only independent claim in the application. Claims 2, 4-9, 13, 15, 20, 21, 23 and 24 depend from claims 1 either directly or indirectly.

Claim 1 has been amended by deleting the phrase "either partially or fully" so that the claim now reads "... can consolidate ~~either partially or fully~~ into dense glass ...". While the specification does indicate that in the present invention the deposition temperatures are 200 - 500 °C lower than conventional processes which require the particles (soot) to be deposited at consolidation temperatures. [See page 3, lines 8-10.]

Applicants believe that the foregoing amendment does not introduce new matter into the specification.

**2. 35 U.S.C. §112 rejection**

Claims 1, 2, 4-9, 13, 15, 20, 21, 23 and 24 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner states that he could:

"find no support for the claimed [1] "column of solid porous perform" (or any other column), or [2] "solid porous", [3] "while successively translating", [4] "a deposition surface at a temperature below a minimum temperature at which the particles can consolidate either partially or fully into dense glass: - either explicit or implicit. This is deemed to be a prima facie showing on [sic] failure to comply with the requirement. The burden is now on Applicant to show the requirement is complied with, or to amend the claims so that they comply."

{Numerals added.}

Applicants submit the following to show that the claims are fully supported by the specification.

1. Regarding [1], the phrase complained of is fully supported by the specification; for example, at on page 2, lines 18-22; page 3, lines 5-6 and 20-21; page 4, lines 15-19; page 5, lines 3-8; the Abstract; and Figure 1. Page 2, lines 18-22 describes synthesizing particles ("soot", see page 3, line 5) by delivering a silica precursor and a

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titania precursor to burner and growing a porous perform by depositing the particles a on a deposition surface while rotating and translating the deposition surface relative to the burner. Particles are solids. Consequently, the perform that is formed is a solid perform. Combining these lines with Figure 1, particularly elements 34 and 40, and the specification on page 4, lines 15-19, it is clear that the preform can be formed on the "bait" (a term of art that describes a deposition surface) and that the perform can be formed in the form of a column. The column will be formed as one continues to raise spindle 36 while depositing the particle on perform 40 as it grows (see page 5, lines 7-8). In view of the foregoing, applicants submit that all the term of [1] that is complained of have been fully set forth in the specification.

2. Regarding [2], see [1] above. Particles are solids and the particles are used to form the 'porous perform.' Hence, implicitly the porous perform form by particles is a solid preform.
3. Regarding [3], the phrase complained of fully supported by the specification on page 2, lines 18-22; page 4, lines 15-24 and the Abstract. These lines clearly indicate that particles (which are solids) are deposited to form a porous perform while the deposition surface (the bait) is being rotated and translated. In view of the foregoing, applicants submit that all the terms of [2] that are complained of have been fully set forth in the specification.
4. Regarding [4], claim 1 has been amended to remove the phrase "~~... either partially or fully. . .~~" as described above in Section 1 of these remarks. With regard to the remainder of the phrase complained of, please refer to the specification on page 3, lines 8-10, and also page 1, line 28, to page 2, line 7. The latter refers to "conventional processes" in which the soot (particles) is captured at consolidation temperatures, a process which leads to problems such as variations in composition which in turn lead to non-uniform thermal expansion properties. In contrast, the invention as described on page 3, lines 8-10, clearly indicates that the present invention eliminates the need to capture soot at consolidation temperatures. The present invention allows one to capture soot at temperatures 200-500 °C lower than the conventional process.

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Applicants respectfully submit that in view of the foregoing facts and arguments, the invention as now claimed is fully described in the specification. Consequently, applicants respectfully submit that it is proper for the Examiner to withdraw the §112, first paragraph, rejection of claims 1, 2, 4-9, 13, 15, 20, 21, 23 and 24.

### 3. Oath/Declaration

The Examiner has indicated that the oath/declaration is defective because it did not identify the application by number and filing date. A new oath/declaration is enclosed with this paper.

### 4. Conclusion

Applicants respectfully submit that all items listed in the Office Actions have been treated herein, and that the pending claims are now in condition for allowance. If there are further items whose speedy resolution would facilitate prosecution and allowance, applicants' undersigned attorney respectfully requests that the Examiner call him so that the items can be discussed and if possible suitable amendments entered into the case by Examiner's amendment.

Applicant believes that a two (2) month extension of time is necessary to make this Reply timely. Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Walter M. Douglas at (607) 974-2431.

25 October 2006  
Date

<b>CERTIFICATE OF TRANSMISSION</b> <b>UNDER 37 C.F.R. § 1.8</b> I hereby certify that this paper and any papers referred to herein are being transmitted by facsimile to the U.S. Patent and Trademark Office at 703-872-9306 on: <u>25 October 2006</u> Date <u>Walter M. Douglas</u> Walter M. Douglas Date
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Respectfully submitted,  
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